## Welcome to the **Interactive Food Defense** Workshop with Government & Industry Representatives at the 2012 Food Safety Summit

April 17<sup>th</sup>, 1 – 5 pm

## Welcoming Remarks and Introduction of Panelists

Clay Detlefsen
Co-chair Food and Ag Sector Coordinating Council &

Vice President & Counsel - International Dairy Foods Association

and

C. Harold (Hal) King, Ph.D. Chick-fil-A Food and Product Safety

### **Workshop Objectives:**

Conduct a high level overview of the various food defense tools and resources that have been developed by government

Provide known industry leaders in the food defense arena an opportunity to share their stories on how these Food Defense tools and resources have been incorporated into existing operations

An 'update' of the current status of the various food defense elements of the FSMA

## Today's Participants Include:

Clay Detlefsen, International Dairy Foods Association
Hal King, Chick-fil-a
Bill Ramsey, McCormick
Rich Ryan, Archer-Daniels-Midland
Craig Henry, Deloitte and Touche, Ilc

Marion Allen, FDA, Food Defense Oversight Team Jason Bashura, FDA, Food Defense Oversight Team Nick Bauer, USDA, Food Safety Inspection Service

And of course.... YOU!!!

## Session 'High level' Overview

Jason Bashura FDA / CFSAN

Office of Food Defense, Communication and Emergency Response Food Defense Oversight Team

### Food Defense Workshop Overview...

- Webinar logistics
- High level overview: Food Defense
- Historical perspective & current efforts
- Government FD tools, resources, programs
  - FDOT DVD Tools, resources, Programs, links, etc.
- FREE-B exercise
- Actionable food defense opportunities
- Next steps, crystal ball discussions

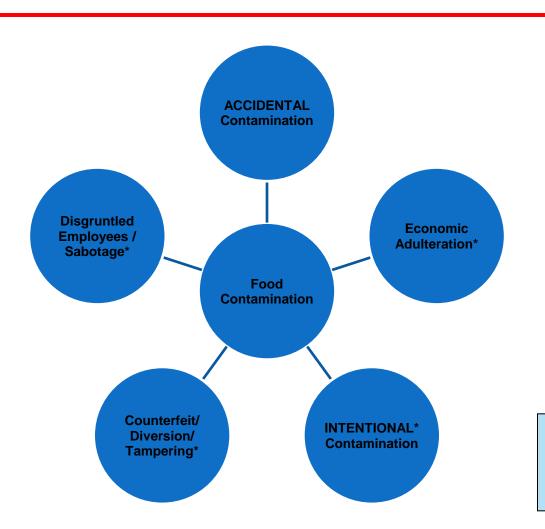
### What is Food Defense?

- Food Defense the efforts to prevent intentional contamination of food products by biological, chemical, physical, or radiological agents that are <u>not</u> reasonably likely to occur in the food supply
  - Human intervention as the source of contamination

### How is it Different?

- Food Safety the efforts to prevent unintentional contamination of food products by agents reasonably likely to occur in the food supply (e.g., *E. coli*, *Salmonella*, *Listeria*)
  - Natural / environmental source of contamination
- Food Security the reliable availability of a sufficient quantity and quality of nutritious food for a population

### The Spectrum of Food Contamination



\* Denotes mode of human interference with wrongful intent

## Why Are We Concerned?



2010

Intentional contamination does happen

US uncovers plot to poison hotels and restaurants at multiple locations **Beijing - The food poisoning of 203** hospital patients in northeast China was an intentional act, police said...

2007



2003

61 Students felled by rat poison in central China



2006

2003

350 Iraqi Policeman Suffer **Food Poisoning** 



Milk alert as poison terrorist strikes



2003

**lol** news

Italy on alert for water poisoner



'Al-Qa'ida' attempt to poison Rome's water supply foiled

2010 **JOURNAL OF FORENSIC SCIENCES** 

**Arsenic Poisoning** Caused by Intentional **Contamination of Coffee** at a Church Gathering



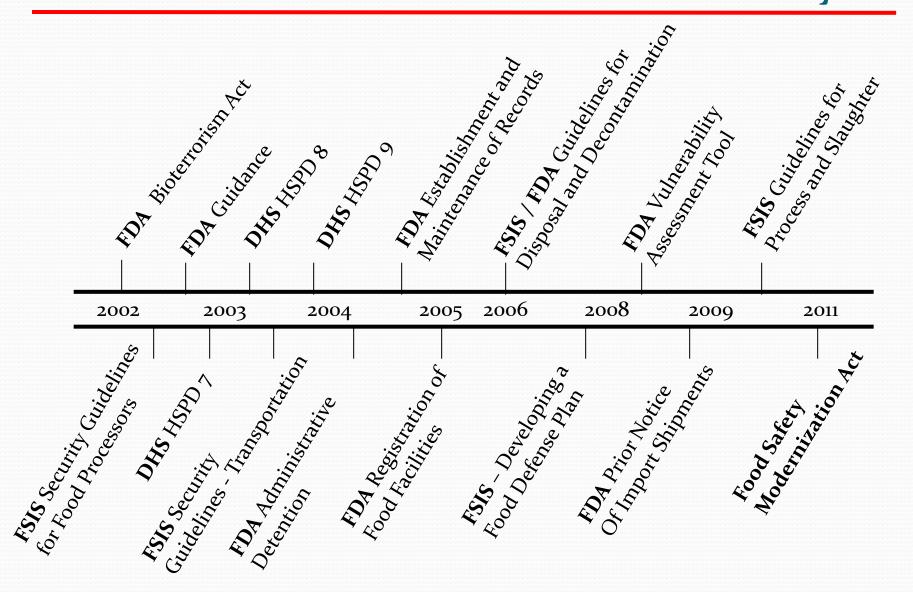
2003

**Grocery store worker** accused of poisoning beef

## Why the Food Supply?

- Deliberate contamination could cause:
  - significant public health consequences
  - widespread public fear
  - devastating economic impacts
  - loss of public confidence in the safety of food and effectiveness of government
  - disruption of trade
  - Increased food insecurity

## **Evolution of U.S. Food Defense Policy**



## Food Safety Modernization Act Updates

#### **FSMA deliverables:**

Regulation

Guidance (to support regulation, will be developed after regulations)

Section 109 – Sector Annual Report

Section 108 - National Agriculture and Food Defense Strategy

### **Sec. 103** Hazard analysis & risk-based preventive controls

- Identify and evaluate hazards that may be intentionally introduced, including by acts of terrorism
- Implement preventive controls to prevent hazards;
- Monitor controls and maintain monitoring records; and
- Conduct verification activities.

### **Sec. 105**. Standards for Produce Safety

- Establish science-based, minimum standards for the safe production and harvesting of fruits and vegetables
- Consider hazards that occur naturally, may be unintentionally introduced, or may be intentionally introduced, including by acts of terrorism.

Sec. 106. Protection against Intentional Adulteration

- Issue regulations and guidance to protect against the intentional adulteration of food
- Conduct vulnerability assessments of the food supply and determine mitigation strategies

**Sec. 108.** National Agriculture & Food Defense Strategy

 A strategic planning document that is in the process of development, as directed, with USDA and DHS

### **FSMA Food Defense Updates**

- http://www.fda.gov/Food/FoodSafety/FSMA/default.htm sign up to receive updates
- Food defense FAQs are available online
- Submit any questions that you may have to <u>FSMA@fda.hhs.gov</u>
- Go to our website, <u>http://www.fda.gov/Food/FoodDefense/default.htm</u>

## A Brief History of "Food Defense"

William Ramsey Corporate Director of Security McCormick & Company, Inc.

### The Events of 9-11-2001

- Operation Enduring Freedom beginning October 7, 2001
- Documents found in Afghanistan caused concern for the safety of the food supply in the U.S.
- On October 23, 2001, representatives of the FDA met with security professionals in the industry.

# With a basic understanding of the need to better secure the food supply...

- The FDA began issuing Security Guidelines
- The USDA-FSIS started guidelines as well
- C-TPAT was proposed November 2001
- DHS was proposed June, 2002 (Director Tom Ridge named on September 22, 2001)
- NFPA and FMI sponsored meetings of food industry security professionals
- HSPD 7- December 2003

### Other Important Dates in Food Defense:

 August, 2003- First industry focus groups meet with DHS

October, 2003- FSIS discusses CARVER studies for industry

• March, 2004-First meeting of FASCC

### **Additional Industry Food Defense Initiatives**

GMA Food Defense Committee

- ASIS Food Defense and Agriculture Security Council
- Numerous local, regional and industry sponsored food defense seminars and events

## SCC Historical Perspective, Current Efforts

Clay Detlefsen Co-chair Food and Ag Sector Coordinating Council Vice-President & Counsel, IDFA

### **Sector Concept & Authorities**

### **Homeland Security Act of 2002:**

- Provided the basis for the Department of Homeland Security (DHS) responsibility for protecting the critical infrastructure
- Assigned DHS the task of creating a national plan for securing critical infrastructure

### **Sector Concept & Authorities**

### Homeland Security Presidential Directive #7:

- Established the framework of the national approach to critical infrastructure protection
- Established the roles for sector specific agencies, other federal agencies, state, local, tribal and private sector partners and others

### **Sector Concept & Authorities**

### <u>Homeland Security Presidential Directive #9:</u>

Established the policy for improving intelligence, emergency response, mitigation strategies and vulnerability assessments to <u>defend food and agriculture</u> against terrorism, major disasters and other emergencies.

### The 18 Critical Infrastructures

- Food and Agriculture
- Defense Industrial Base
- Energy
- Public Health and Healthcare
- National Monuments and Icons
- Banking and Finance
- Water
- Chemical
- Commercial Facilities
- Dams

### The 18 Critical Infrastructures

- Emergency Services
- Commercial Nuclear Reactors, Materials and Waste
- Information Technology
- Communications
- Postal and Shipping
- Transportation Systems
- Government Facilities
- Critical Manufacturing

### **Food & Agriculture Coordinating Councils**

Government Coordinating Council (GCC) Sector Coordinating Council (SCC)

### **Stated Goal:**

A public-private effort that protects public health and that builds and sustains a protected national food supply chain where the U.S. Food and Agriculture Infrastructure is secure, resilient and prepared.

### **SCC/GCC** Activity

The SCC and GCC meet face-to-face three times per year

The Leadership of the two councils meet once per month via conference call

The SCC and GCC periodically conduct tabletop food defense exercises. One or two per year

At times, the contact between the GCC and SCC can be daily

## SCC's Underlying Owners and Operators

- 2,000,000 Farms
- 160,000 Domestic Registered Food Facilities
  - 1,000,000 Restaurant/Food Service Outlets
- 35,000 Supermarkets (sales > 2M)
- 144,000 Convenience Stores
- 56,000 Pharmacies
- Plus many more

### **SCC** Mission

Serves as the primary, policy-level interface with the Department of Homeland Security (DHS), the Sector Specific Agencies (FDA and USDA) and other federal, state and local agencies on homeland security matters

Communicates the sector's needs and requests for resources to the government

# Private Sector Experience & Lessons Learned

#### **Sector Formation and Existence:**

- Sector concept created concurrent to sector formation
- Early misconceptions have alienated some valuable participants
- Enormous potential should a palpable threat materialize
- Critical relationships within the sector and with government personnel have materialized
- Mutual understandings and trust have been developed
- Progress has been made, more needs to be achieved
- Overall strong conceptual support from 18 sectors

# Private Sector Experience & Lessons Learned

### Strategic Partnership Program on Agroterrorism (SPPA)

- Extremely well received by industry and government alike
- Excellent opportunity for the private sector to educate officials about their operations and to interact with government
- Excellent opportunity for the private sector to understand government concerns
- Excellent opportunity for industry to learn from each other
- Numerous concerns ruled-in or ruled-out

## Benefits to SCC Members for Participation in Sector

- Diverse Networking Opportunity
- Having a Voice in Establishing Priorities
- Ensuring That Activities Are Well-Reasoned
- Gain Insight into Governmental Operational Issues
- Opportunity to Shape the Partnership

### **Future Challenges for the SCC**

- Most potential SCC representatives don't understand the benefits
- There are over 4 million entities in the Sector, most have never heard of the SCC, or the Food/Ag Sector
- The sector is very diverse and does not lend itself well to traditional physical asset-based security practices
- In many locations outside Washington, DC, threats are seen as theoretical or unlikely

### Future Challenges for the SCC

- The Sector and SCC lacks visibility and the Sector is largely misunderstood
- Two-way communications strategy during an event needs work
- The SCC connection with states and localities is minimal
- Private sector participation is lacking
  - Efforts are disproportionately driven by the GCC, though the GCC would welcome SCC engagement

#### The Bottom Line

- The partnership is far from perfect
- But, we are far better off today for it
- Volunteerism is at an all time low which limits what can be done
- Should something happen, we will be able to act more quickly and efficiently
- The investment to date has been worthwhile

#### For More Information on the SCC

#### **Contact:**

Clay Detlefsen 202-220-3554 or <u>cdetlefsen@idfa.org</u>

OR

Randy Gordon 202-289-0873 or <a href="mailto:rgordon@ngfa.org">rgordon@ngfa.org</a>

# Food Defense Research ... and the \$5 apple

Rich Ryan Deputy Director, ADM Corporate Security

### Risk Analysis: Core Assumption

If any attacker has the *ability*, *opportunity* and *desire* to do harm, risk is present.

(Eliminating opportunity is the only realistic and practical way to address those risks.)

When the risk involves intentional contamination of in an international food supply chain, traditional security measures alone will never be sufficient.

### Food Defense and the \$5 Apple

- The international food supply chain is a:
  - Dynamic
  - Complex
  - System of systems
- Impossible to effectively secure the entire supply chain
- Essential to apply science-based, surgical, preventive technologies
- The alternative is a \$5 apple

## Food and Agriculture Sector Joint Committee on Research (JCR)

#### Mission

To assess and advise the Food and Agriculture Sector (GCC and SCC) on homeland security researchable needs and goals.

This effort will make appropriate use of existing vulnerability work, consider threat information, make discovery of operational needs in the sector, consult or involve the research community as needed, and refine or update recommendations periodically.

A successful effort will be measured by outcome—useable answers and mitigation outcomes.

## FDA's Tools, Resources and Programs

Marion Allen FDA / CFSAN Office of Food Defense, Communication and Emergency Response Food Defense Oversight Team

#### This Segment Will Focus On:

FDA developed Tools and Resources that are available to our stakeholders *FREE of charge!!!* 

Common Vulnerabilities - UPDATE

Food Defense Efforts that are underway

## Food Defense Programs, Tools and Resources



#### **Training Programs**

ALERT: for management and regulators



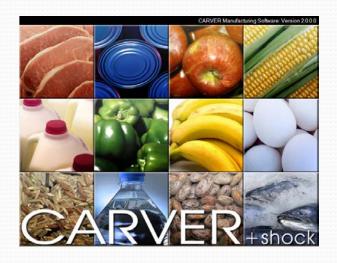
Employees FIRST: for front-line workers



- •Training kit is available on-line:
  - -Handouts
  - -Presentations
  - -Video

- VulnerabilityAssessment Software
  - Download
  - Free of charge

- Mitigation Strategies Database
  - On-line resource
  - Open access

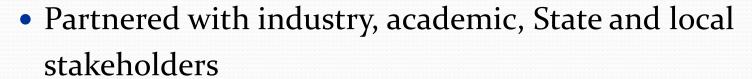




http://www.fda.gov/Food/FoodDefense/default.htm

#### **Food Defense Programs**

- Strategic Partnership Program Agroterrorism
   (SPPA) 2005 2008
  - FDA, USDA, FBI and DHS
  - Vulnerability assessment initiative
    - 30 different food systems



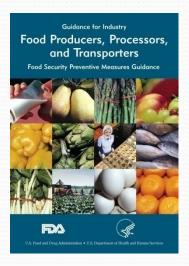
- Identified vulnerabilities
- Discussed mitigations and research needs

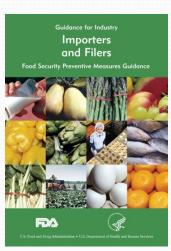
### Food-Related Emergency Exercise - Bundle

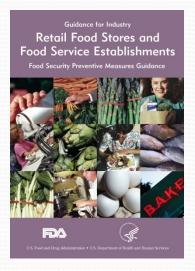
- FREE-B
  - Complete kits
    - Workshop, seminar and tabletops
  - Different scenarios
    - Intentional
    - Unintentional
  - FREE and downloadable from <u>http://www.fda.gov/Food/FoodDefense/default.htm</u>

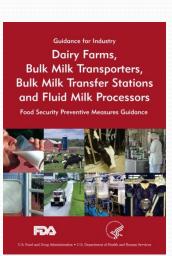
#### **FDA Industry Guidance**

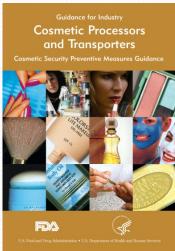
 For food producers, processors and transporters; importers and filers; retail food stores and food service establishments; dairy industry; and cosmetic processors and transporters











### **Vulnerability**

A weakness in the design, implementation or operation of an asset or system that can be exploited by an adversary

- <u>Vulnerability Assessment</u>: The process used to identify specific points in the food supply chain where intentional contamination has the greatest potential to cause economic and public health harm
  - Process of identifying and prioritizing the weaknesses (vulnerabilities) in a food operation

#### **Common Vulnerabilities**

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#### FDA Vulnerability Assessments

- Yogurt
- Bottled water
- Baby food (jarred)
- Apple juice
- Lettuce (bagged)
- Infant formula (pwdr)
- Fluid milk
- Retail milk (1 gal size)
- Animal feed
- Flour
- Ice Cream
- Chocolate

- Breakfast Cereal
- Grocery store rotisserie chicken
- High fructose corn syrup
- Export grain elevator corn
- Frozen pizza
- Refrigerated food distribution
   lettuce
- Pet Food
- Turnpike Service Center
- Deli Salads
- Transportation (OJ/Milk)

#### **Common Vulnerabilities**

- Vulnerability Assessment results show:
  - Common vulnerabilities exist regardless of particular food product
  - Common vulnerabilities can be organized into several broad activity types

## **Activity Type I**

- Coating
- Mixing
- Grinding
- Rework

Effect of these steps would be even distribution of a contaminant

#### **Activity Type II**

- Ingredient Staging
- Ingredient Preparation
- Ingredient Addition

Open process steps with access to product stream

## **Activity Type III**

- Bulk Liquid Receiving
- Bulk Liquid Loading

High probability of uniform mixing

### **Activity Type IV**

- Bulk Liquid Storage
- Non-bulk liquid holding and surge tanks

Tanks are often agitated to prevent separation; often in isolated areas of facility

## Other efforts that are underway....

#### **Food Defense Plan Builder**

- Currently under development
- User-friendly application designed to assist owners and operators of food facilities develop a personalized food defense plan
- Guides users through a series of sections that make up the contents of a food defense plan.
  - Company Information
  - General Preventive Measures
  - Vulnerability Assessment
  - Mitigation Strategies
  - Response Plan
  - Action Plan

#### **Food Defense Plan Builder**

- Harnesses existing FDA tools and resources into one single application
- FDA will not track or have access to documents or any content saved by users of the Food Defense Plan Builder
- Content will align with FDA guidance and regulations, as appropriate

## **Online Food Defense Training Tools**

Being updated to reflect current thinking on Food Defense





Food Drugs Medical Devices Vaccines, Blood & Biologics Animal & Veterinary

Cosmetics

Radiation-Emitting Products Tobacco Products



Home Mod Food@Defense & Emergency Response

#### Food Defense & Emergency Response

Tools & Resources

Education & Outreach

Food Defense Programs

Regulatory Information

Emergencies

#### Resources for You

- CFSAN Publication Order Form (PDF - 555KB)
- RFA Innovative Food Defense (PDF - 164KB)

#### Food Defense & Emergency Response

FDA works with other government agencies and private sector organizations to help reduce the risk of tampering or other malicious, criminal, or terrorist actions on the food and cosmetic supply.

Below are the components of Food Defense & Emergency Response.

#### Food Safety Summit Workshop: Interactive Food Defense Workshop

Industry and government food defense representatives will provide insights on food defense that are sure to compliment current industry based food defense planning efforts. More >





#### **Tools and Resources**

**Education & Outreach** 

**Food Defense Programs** 

**Regulatory Information** 

#### **Emergencies**

Page Last Updated: 03/28/2012

Note: If you need help accessing information in different file formats, see Instructions for Downloading Viewers and Players.

#### Tools & Resources

**Education & Outreach** 

Contact Us

- ALERT
- FREE-B
- Employees FIRST
- See Something, Say Something™ Campaign
- Vulnerability Assessment
- Mitigation Strategies Database
- More...

# Please be sure to visit our booth in the exhibit hall, #523

#### USDA FSIS Food Defense Training, Tools, and Resources

Nicholas Bauer Sr. Food Defense Analyst Food Safety and Inspection Service United States Department of Agriculture

#### Who We Are and Our Mission



- Food Safety and Inspection Service (FSIS)
  - Public health agency in U.S. Department of Agriculture (USDA)
  - Mission: ensure that U.S. supply of meat, poultry, egg products is safe, wholesome, and correctly labeled and packaged
- FSIS Office of Data Integration and Food Protection (ODIFP)
  - Mission: prevent, prepare for, and coordinate a response to an intentional attack on the food supply

#### FSMA—FSIS and Food Defense

- FSMA's intent: provide new tools for FDA to prevent intentional contamination of food
- USDA FSIS supports these efforts
  - FSIS will participate in interagency discussions and reviews
  - FSIS support/participation will help ensure continued FSIS-FDA consistency in food defense principles
  - Continues a 10-year federal partnership on food defense

#### FSIS "Model" for Food Defense Plans

- 2004: FSIS Proposed Rule for Food Defense Plans
  - Federal establishments required to develop, implement, and maintain plans to prevent intentional contamination
  - Plans to be reviewed annually and modified as appropriate
- In response, industry proposed FSIS allow voluntary adoption of food defense plans
  - Industry to work collaboratively with government to achieve goal of food protection, assist with outreach
  - FSIS to provide industry with tools they need for food defense. Recent tools include the General Food Defense Plan, web-based FSIS Food Defense Risk Mitigation Tool
- FSIS will consider requiring food defense plans (make rulemaking a priority) if voluntary adoption was unsuccessful

# Food Defense Plan Survey—2011 Results

- Food defense is a Performance Goal for FSIS
  - By 2015 90% of regulated facilities are to have voluntarily adopted and have a functional food defense plan
- Continued positive movement in the voluntary adoption of food defense plans
  - Overall: 75% of all official establishments have a functional food defense plan (up from 62% in 2009)
    - Large establishments: 96%
    - Small establishments: 84%
    - Very small establishments: 65%

#### General Food Defense Plan

- Needed a tool to help small plants
- FSIS held focus group with industry to develop the general food defense plan
- Can be easily adopted by reviewing the plan and signing the cover page
- Available online in Spanish, Chinese, Vietnamese, and Korean

	od Defense Plan y Measures for Food Defense
Securit	y Measures for Food Defense
Establishment Name:	
Establishment Location	n (city, state):
	umber:
	umber:
	umber:
	umber:
	ımber:
	umber:
FSIS Establishment Nu	umber: vledge that this establishment has measures in place in accordance with this

## FSIS Vulnerability Assessments

- FSIS has conducted over 30 vulnerability assessments and updates, including:
  - Deli meats
  - Establishment size
  - Ground beef
  - Hot dogs
  - Imported food products
  - Liquid eggs

- Meals ready-to-eat
- National School Lunch Program
- Ready-to-eat chicken
- Threat agents
- Transportation
- Water used in food



#### Food Defense & Emergency Response

#### **Risk Mitigation Tool**

#### **FSIS Food Defense Risk Mitigation Tool**

Contains nonbinding recommendations

This online tool is part of an ongoing effort by FSIS to help protect the nation's supply of meat, poultry, and egg products from intentional contamination. During vulnerability assessments conducted jointly with FSIS, industry representatives suggested that a searchable, user-friendly tool was needed to facilitate identification and selection of applicable mitigation strategies (i.e., countermeasures).

This tool identifies some possible countermeasures that companies could implement, as part of a food defense plan, to better protect their business, employees, and customers. Some of the countermeasures are specific to particular assets or activities (nodes); others apply more generally to the facility as a whole. Written guidance regarding mitigation strategies is also available in Food Defense Guidelines for Slaughter and Processing Establishments, which can be obtained by calling the Small Plant Help Desk at 1-877-FSIS HELP (374-7435) and is also available on the web at http://www.fsis.usda.gov/PDF/Securityguide.pdf.

The countermeasures listed in this tool are neither mandatory nor exhaustive. Not all of the identified strategies will be applicable, practical, or effective for all types and sizes of slaughter and processing establishments. Additional strategies not included here may also be useful. The user should implement countermeasures appropriate to the specific circumstances of their establishment and operations.

#### Lookup Tool

The mitigation measures are organized by the category of operation and node (i.e., specific piece of equipment).

- First, select an industry process category from the provided list, then
- Choose from among the list of Nodes associated with that category. After selecting the node of interest,
- Click "SELECT" to view a list of potentially applicable mitigation strategies.

SELECT

You must choose a Category and a corresponding Node.

Make your selections:
Choose a Category
Choose a Node:

#### Food Defense & Emergency Response

- O Preparation & Prevention
  - Guidance Materials
- Surveillance
- Response
  - Exercise Reports
- Recovery
- Office of Data Integration & Food Protection
- Associated Government Emergency Resources

#### Media Help

To view PDF files you must have Adobe Reader installed on your computer.



http://www.fsis.usda.gov/ Food\_Defense\_&\_ Emergency\_Response/ Risk\_Mitigation\_Tool/ index.asp

Internet

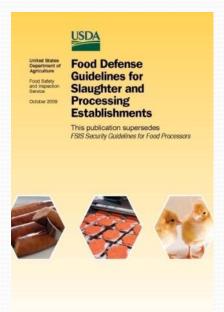
#### Food Defense Research Database

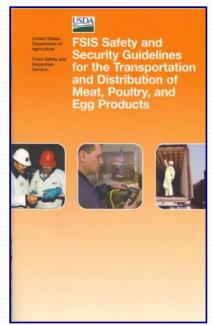


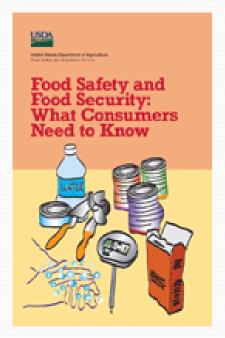


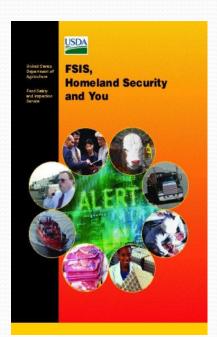
#### **FSIS Food Defense Guidance**

 FSIS has prepared food defense guidance to food processors, importers, transporters, distributors, and consumers.









## **Training Resources**

- University of Tennessee
  - Agriculture and Food Vulnerability Assessment Training
  - Sharing Information and Intelligence Related to Food Importation and Transportation
  - http://www.vet.utk.edu/cafsp/
- Louisiana State University-National Center for Biomedical Research and Training (NCBRT)
  - A Coordinated Response to Food Emergencies
  - Preparing Communities for Agroterrorism
  - Preparedness and Response to Food and Agriculture Incidents
  - http://www.ncbrt.lsu.edu/catalog/performance/foodresponse.aspx
- South Dakota State University
  - Food Defense Security in Foodservice Operations DVD (2007)
  - http://www.youtube.com/watch?v=4VuDnl5e99k

### **Training Resources**

- DOT Food Safety/Defense Training
  - Mandated by Sanitary Food Transportation Act of 2005
  - Rail and highway safety inspectors
  - How to recognize suspected incidents of contamination or adulteration or other potential food safety/defense concerns during safety inspections
  - 11,000 federal & state safety inspectors
  - Developed reference card with indicators and FSIS contacts to report incidents

#### **International Food Defense Outreach**

- Goal: to institutionalize food defense measures and encourage their recognition globally to prevent incidents which would otherwise have severe and negative social, economic, and public health implications
- APEC Food Defense Pilot Program (2008-2011)
  - 3-phase country-specific pilot projects executed with Peru, Thailand, the Philippines, and Vietnam for individuals from government, academia, industry sectors.
  - Projects included relationship building, train-the-trainer workshops, awareness workshops, and follow-up food defense plan development guidance
- The APEC Pilot Program encouraged additional global outreach:
  - Regional events for Latin America and the Caribbean
  - Follow-up workshops in APEC economies and Panama
  - Awareness Roadshows in China and Mexico
  - Collaborative Exchange opportunities and Study Tours

#### **International Food Defense Outreach**

#### Accomplishments:

- Significant increase in amount of facilities employing food defense plans and/or incorporating food defense measures into their basic food safety plans
- Considerable modification and creation of new curriculum in universities at undergraduate, post-graduate, and continuing education levels
- Creation of interagency government working groups formed to provide guidance to industry constituents
- Awareness Workshops planned for 2012-2014:
  - Asia (India, Japan, South Korea, Malaysia, Indonesia, Singapore)
  - Central/South America (Costa Rica, Guatemala, Argentina, Chile, Brazil, Colombia)
  - Middle East and Eurasia (Jordan, Israel, Turkey)
  - Africa (Morocco, Egypt, Kenya, Uganda, South Africa)
- Collaborative Exchange programs with UMN-NCFPD

#### On the Horizon

- Economically motivated adulteration (NCFPD):
  - EMA database
  - Modeling to identify trade, price, and other indicators of potential EMA
  - Integration of multiple data streams (e.g., production, trade, etc.) to identify meaningful patterns and anomalies in the food supply chain
- Use of social media:
  - Pre- and post-event messaging
  - Identification and tracking of potential indicators of a food defense incident

# Questions?



# Practical Food Defense Considerations and Updates on Food Defense Research

Craig Henry Deloitte and Touche, llp

Rich Ryan Deputy Director, ADM Corporate Security

#### **Crisis Communications**

Food Defense Program Considerations

Food Defense / Security Assessments

Practical FD Supply Chain Considerations

#### **Crisis Communications**

- 1. During a crisis event communications are critical.
- 2. Top management must have a reliable system in place to protect the public, company brands, and maintain business continuity.
- 3. Companies must determine how they will access and manage factual information in virtually real time.
- 4. Real time decisions regarding operational decisions may be needed.

## **Basic Food Defense Program Considerations**

- External physical security measures
  - Remember that "gates, guns, guards" only provides a general layer of security
  - and will never provide protection from the insider threat
- Internal process control security measures
- Personnel security measures
- Product and supply security measures
- Crisis management response security measures
- Internal and External Communication Programs
- Maintenance of Consumer/Customer Confidence
- Qualifying crisis event facts to support critical corporate decisions

# Food Defense/Security Assessment

- 1. Many companies have not taken advantage of the DHS Protective Security Advisor (PSA) program to obtain a comprehensive assessment of their facility security measures.
- 2. Consider DHS PSA tools to characterize facility risk which includes the level of crime in the local area
- 3. The PSA's are <u>not food subject matter specialists</u> so you should seek out appropriate assistance to fully develop a comprehensive food defense program.

# Practical Food Defense Supply Chain Considerations

- 1.) Evaluate all points of the upstream supply chain for adequate food defense controls
  - 1. Understand the supplier's food defense plans and controls,
  - 2. their upstream vulnerabilities in their supply chain,
  - Including security procedures at the facility entrance gate i.e.) proper management of trailer and container seals matched to the Bill of Lading

# Practical Food Defense Supply Chain Considerations

- 2.) This is especially important with supply chains exporting to the US which are almost impossible to control all of the time
- 3.) It is most important to have a program to ensure that your product is <u>safe when it leaves your control</u> no matter what happened to it before you received it

# **Practical Food Defense Summary**

- Evaluate establishment's current food defense programs for adequacy compared with FDA, DHS and USDA-FSIS guidance
- Utilize the available food defense planning tools available through DHS, FDA and USDA
- Conduct a CARVER + Shock analysis of products and facilities
- Conduct a practical assessment of facility security systems and procedures for proper execution and effectiveness
- Assess the upstream food defense programs for supply chain exporting to the US

# **Practical Food Defense Summary**

- > Establish an incident command structure
- Crisis management teams should be very familiar local and regional fusion centers to enhance crisis communications
- Establish rapport with regulatory agencies regarding food defense requirements and procedures
- Engage with the Food and Ag Sector Coordinating Council to maintain a current knowledge base and obtain factual information

## The Security Process

- Know what risks you face
- Know the current security status
- Identify gaps
- Develop, recommend, implement countermeasures
- Re-evaluate risks as the security environment changes

# The Total Security Package

- Prevention
  - Efforts to prevent loss from occurring
- Response
  - Providing for a timely and effective response to incidents that we were not able to prevent
- Recovery
  - The effort to return to a normal state of function as quickly as possible

## Corporate Security Risk Management Strategy

Expenditures for security should only be approved if the expenditure is directly related to a foreseeable risk, and, the expenditure will ensure the most effective and efficient method for mitigation of that risk.

Otherwise we have \$5 apples.....

# Food Defense (to mitigate actual risk) vs.

Food Defense (for regulatory compliance)

"You can't {effectively} regulate defense"

Paul G. Kaplan
Sandia National Laboratories

Camouflage is continuous: Even the best defense is, at best, temporary.

#### **Product Contamination Motivation**

#### Terrorism

• Intent to kill as many people as possible

#### Economic Adulteration

Increase the value of a product

#### Issue Oriented Attacks

• Interest group or union effort to damage an industry or company without killing innocents

#### Extortion

Criminal effort to obtain money

# **Understanding Risk to the Company**

# **Operational Risk**

VS.

**Enterprise Risk** 

### Transition to the FREE-B slides

# Practical solutions for Food Defense

Or...

# Lessons I have learned the hard way

William Ramsey
Corporate Director of Security
McCormick & Company, Inc.

## A fact of life in the industry:

• In most of the industry, food defense will be managed by someone other than a security professional

## Questions we need to ask ourselves:

- What threats are we protecting against?
- What are our vulnerabilities / risks?
- Why is food defense important?
- Why says so?
- How/when will we know if we have sufficient food defense strategies in place?
- What are the best methods to accomplish food defense?

# Identify the important, overarching goals for food defense

- Know who is in your facility at all times and reasonably control their access
- Identify the vulnerabilities in your operation, determine the levels of risk and mitigate
- Investigate, report and mitigate any breaches of security or food defense measures
- Develop polices, procedures, training to support your food defense measures and plan

# Custom fit your mitigation strategy to the vulnerability

- Some solutions can be fairly generic, such as using locks, access control and CCTV to control entrances/ exits/ loading docks, etc.
- Some recognized vulnerabilities may require innovative protection solutions, such as mixing/ blending/ silo storage/ rail and truck parks, etc.
- There is no "one size fits all" checklist type of solution for food defense. Each facility may require a "one off" mitigation strategy for a particular issue.

#### Evolution and Use of Tools for Research

Rich Ryan Deputy Director, ADM Corporate Security

#### From CARVER + Shock

to

Science Based Agent / Process Specific Risk Modeling

# ADM Science-Based Food Defense Risk Assessment Methodology

- Development history
  - Necessary to characterize our risk and protect proprietary information
- Agent specific modeling tool adaptable to any product, process, or supply chain
- Determines risk, isolates risk, identifies research needs

#### **ADM Food Defense Risk Assessment Model**

#### Objectives

- Identify threat agents of concern for Food Defense
- Consider non-traditional agents
- Identify and prioritize vulnerabilities of a product specific process line

- Probability that aggressor could gain access to Op Units (pAc).
  - Determined via fault-tree analysis
  - Relies on expert opinion and physical security references
- Aggressor scenario can be
  - External (activist/terrorist)
  - - Internal (disgruntled employee)

- Probability that an aggressor could acquire enough of an agent for a successful contamination (pAq).
- Best-case-scenario: Based on consensus of expert opinion
  - DHS/CDC Bioterrorism agents of concern
  - Known availability
    - Microbes (Salmonella)
    - Biological Toxins (Botulinum)
    - Acutely Toxic Chemicals (Brodifacoum)
- Rad agents to be added

- Interdiction Values
  - Extent to which processing parameters will:
    - Denature Toxins and ATCs
    - Inactivate/destroy Microbes
    - Dilute agent below [] of concern

- Quantity of threat agent required
  - Biological toxins and Acutely Toxic Chemicals
    - $LD_{50}/LD_1$ 
      - Adult (75 kg)
      - Child (25 kg)
  - Microbes
    - ID

### ADM Food Defense Risk Assessment Model Modeling Risk

- "Risk" is a function of access, acquisition and the amount of agent that would pass through a process unit intact.
- Building in a sensitivity analysis capability to provide decision support for countermeasure cost justification.



#### "NOT ON OUR WATCH"

ADM Food Defense Watchman Program

Just because a facility has no immediate warning does not necessarily mean that the facility is not a target or is not being considered for targeting. Therefore, we must constantly be vigilant.

#### What to Look For?

- Unusual or prolonged interest in security measures for personnel entry points and access controls, or perimeter barriers such as fences or walls.
- ✓ Unidentified individuals present or loitering in unusual areas.
- Person(s) carrying items or substances not normal for operations in that area.
- Discreet use of still cameras, video recorders or note taking at non-tourist type locations.
- Deliberate probing of security responses, such as purposely causing a false alarm, fake accidental entry to an unauthorized area, or other suspicious activity designed to test security responses without prior authorization.
- Any unusual behaviors, activities, persons or items in or around the facility.



- ✓ Notify management if you observe something suspicious.
- Secure all ingredients, supplies and finished product.
- ✓ Pay close attention to seal policies.
- Secure access to all points of building entry including loading docks, storage areas.
- Limit visitor access through the use of checkpoints, badges and escorts while on property.
- Monitor incoming and outgoing packages for evidence of tampering (i.e., damaged packages, evidence of reseating of packages, leaking packages).
- Require contractors to screen and train their employees on food defense and security awareness procedures. Provide plant supervision or oversight of contract staff working in the facility.
- ✓ SCAN: See unfamiliar person on the premises, Challenge the visitor in a nonthreatening manner by facing and making eye
  contact, Ask "Can I help you?" Notify manager or supervisor about the visitor.

#### What to Report?

- ✓ Time of the event
- ✓ Location of the event
- Activity witnessed
- Suspect description
- Suspect equipment
- Vehicle description: CYMBL (Color, Year, Make, Body style, License (number, year, issuing gov't))







If there is	an <u>IMMEDIATE</u> threat to life call 911 FIRST!!	
Otherwise call:		
ADM Corporate Security 24 Hour En	ergency Contact: 1-800-637-5843	
Location Manager:	Contact Number:	
Local Police:		

Created by ADM Corporate Security April 2011

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## Facility Risk-Assessment and Security Guide

...for Grain Elevators, Feed/Ingredient Manufacturers, Grain Millers and Oilseed Processors...









National Grain and Feed Association



North American Millers Association

### Food Defense.....

It *IS* Everybody's Business!!!

#### What we've discussed....

Conduct a high level overview of the various food defense tools and resources that have been developed by government

Provide known industry leaders in the food defense arena an opportunity to share their stories on how these Food Defense tools and resources have been incorporated into existing operations

An 'update' of the current status of the various food defense elements of the FSMA

# Next steps, future opportunities...

## Wrap up, summary

Contact information provided below is in alphabetical order, not in order of appearance on the panel

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